



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,765	12/29/1999	MARKO PARIKKA	297-009122-U	1440

7590 09/07/2005

CLARENCE A. GREEN
PERMAN & GREEN LLP
425 POST ROAD
FAIRFIELD, CT 06430

EXAMINER

SEMBER, THOMAS M

ART UNIT PAPER NUMBER

2875

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/473,765	Applicant(s) PARIKKA ET AL.	
	Examiner Thomas M. Sember	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/24/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 and 32 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12, 16-22 and 30-31 is/are rejected.
- 7) ☒ Claim(s) 5 and 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4/05 7/5</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-12, 17, 19-22 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 9127894. JP9127894 discloses a light pipe 12 comprising: a first surface, said surface including surface formation patterns 30 (see figure 1) having diffractive properties for coupling light out from the light pipe (4) to provide backlighting of a flat panel display by means of at least one light source, said surface formation patterns comprising uniform, mutually different areas distributed over said first surface. The areas comprise first pixel-like formations having a first orientation and second pixel-like formations having a second orientation being different than that of the first pixel-like formations orientation (see derwent abstract line 8, hologram whose area density of diffraction grating changes in proportion to the distance it made while diffracting light from the tubular source), said pixel-like formations being arranged to diffract light for producing uniform lighting and to produce substantially uniform light out from the light pipe regardless of the distance from the light output regardless of the distance from the light input end of the light pipe. Regarding claim 9, as broadly claimed the pixels form elongated shapes. Regarding claims 30-31, the limitation of "wherein the surface formation patterns are manufactured directly on the first surface" is a product by process claim and only the product "surface formations" is given patentable weight.

Claim Rejections - 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 8-9, 17 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishikawa (EP0821293A2) (figures 14(c) and 19). Nishikawa (EP0821293A2) (figures 14(c) and 19) discloses a light pipe 12 comprising: a first surface, said surface including patterns having surface formation patterns (30) for coupling light out from the light pipe (4) to provide backlighting of a flat panel display by means of at least one light source, said surface formation patterns comprising uniform, mutually different areas distributed over said first surface. The areas comprise first pixel-like formations having a first orientation and second pixel-like formations having a second orientation being different than that of the first pixel-like formations orientation (see derwent abstract line 8, hologram whose area density of diffraction grating changes in proportion to the distance it made while diffracting light from the tubular source), said pixel-like formations being arranged to diffract light for producing uniform lighting and to produce substantially uniform light out from the light pipe regardless of the distance from the light output regardless of the distance from the light input end of the light pipe. Regarding claim 9, as broadly claimed the pixels form elongated shapes. Regarding claims 30-31, the limitation of "wherein the surface formation patterns are manufactured directly on the first

surface” is a product by process claim and only the product “surface formations” is given patentable weight.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over (JP9127894 or by Nishikawa (EP0821293A2) over Okuda et al. (JP9127894 or by Nishikawa (EP0821293A2) discloses the claimed invention except for a light guide having fluorescent or phosphorescent properties (JP9127894 or by Nishikawa (EP0821293A2). Okuda et al teaches a light guide having a fluorescent properties 5 for efficiently illuminating a light guide. It would have been obvious to one skilled in the art at the time the invention was made to modify the light guides of (JP9127894 or by Nishikawa (EP0821293A2) to include fluorescent properties as taught by Okuda et al in order to efficiently spread light to the surroundings.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2875

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over (JP9127894 or by Nishikawa (EP0821293A2) in view of Janson et al (figure 30) (JP9127894 or by Nishikawa (EP0821293A2) discloses the claimed invention except for teaching of using two further light sources with the light guide of (JP9127894 or by Nishikawa (EP0821293A2). Janson et al teaches using four light sources with a light guide for efficiently illuminating a light guide. It would have been obvious to one skilled in the art at the time the invention was made to modify the over (JP9127894 or by Nishikawa (EP0821293A2) to include an additional light source as taught by Jannson et al in order to efficiently illuminate the light guides of (JP9127894 or by Nishikawa (EP0821293A2).

Response to Arguments

5. Applicant's arguments filed on 06/24/05 have been fully considered but they are not persuasive. Applicant argues that the prior art reference to Takeuchi and Nishikawa fails to disclose applicant's claimed invention. However, the limitations applicant addresses are not claimed by the applicant. It is noted that the features upon which applicant relies (i.e., surface formation patternsare provided as an integral part of a surface of the light pipe and surface formation patterns, included in a surface of a light pipe") are not recited in the rejected claim(s). Although the claims are interpreted in

light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The applicant only claims "said surface formation patterns comprising uniform, mutually different areas distributed over said first surface." Therefore, the surface formation patterns of applicant are not claimed as being integral or in the surface of the light pipe and the holograms of Takeuchi and Nishikawa meet applicant's claimed invention because the hologram formations are distributed over their first surfaces.

Secondly, applicant argues that Nishikawa fails to teach that the surface has diffractive properties. This argument is not found persuasive by the examiner. Nishikawa does teach the hologram has diffractive properties. For example, applicant in the abstract of Nishikawa, Nishikawa teaches the hologram is diffractive.

Finally, applicant argues that Janson fails to disclose surface formations to be combined with the references of Takeuchi or Nishikawa. However, the reference of Jones wasn't combined with the primary references of Takeuchi or Nishikawa to teach surface formations. Rather the reference of Jones was used by the examiner to teach using four light sources with a light guide for efficiently illuminating a light guide; and that it would have been obvious to one skilled in the art at the time the invention was made to modify the over (JP9127894 or by Nishikawa (EP0821293A2) to include an additional light source as taught by Janson et al in order to efficiently illuminate the light guides of (JP9127894 or by Nishikawa (EP0821293A2).

Allowable Subject Matter

6. Claims 5 and 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 32-35 are allowable.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

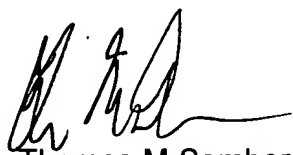
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2875

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Sember whose telephone number is 571-272-2381. The examiner can normally be reached on M-F 8 A.M- 5.30 p.m. first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571-272- 2878. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas M Sember
Primary Examiner
Art Unit 2875
